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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,957	08/09/2001	Lise Wiseman	12587-008001	5383
26212 7590 07/02/2007 FISH & RICHARDSON P.C. P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER ZHEN, LI B	
			ART UNIT 2194	PAPER NUMBER
			MAIL DATE 07/02/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

09/927,957

Applicant(s)

WISEMAN ET AL.

Examiner

Li B. Zhen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Claims 1 – 48 are pending in the application.

### *Response to Arguments*

2. In response to the Non-Final office action dated 01/12/2007, applicant argues: Maffeis does not teach “publishing the common format data object to a selected communication channel, the channel being selected on the basis of the data object”. The “channel” of claim 1 corresponds to the link between the thin message client and the message proxy. However, Maffeis does not suggest that different JMS messages that concerns different topic would be sent to the proxy along different path and that the different path was chosen on the basis of the topic of the JMS message [pp. 12 – 14]. In response to the argument, examiner respectfully disagrees and notes that Maffeis’s disclosed “topic”, not “link”, reads on the recited channel. The topics in Maffeis are message queues that function as a communication channel between a subscribing JMS client and a publishing JMS client [col. 3, lines 47 – col. 4, line 4]. Each topic organizes the message according to different categories [i.e. stock quotes, sports news, data from a transmission channel; emphasis added, col. 5, lines 35 – 50]. Therefore, topics in Maffeis can be used as a communication channel that is associated with a specific communication path. In addition, it is noted that applicant’s claims and specification do not define the channel as a communication path. Applicant’s specification discloses that the channel architecture defines how messaging will be partitioned for high-performance communications [p. 17, paragraph 0041]. A “channel” is a key

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organizational concept in the publish/subscribe model in that it accepts incoming events from publishing applications and communicates these events to subscribers of that channel [p. 34, paragraph **0065**]. Examples of communication channel includes AccountChannel, ProvisionOrderChannel, ToSiebel, Acknowledgement Channel, ProvisioningRequest, ProvisioningResponse, BillingChannel, ToArbor, and ToPortal [pp. 14 – 15, paragraph **0035**, see also **Fig. 3**]. Based on applicant's disclosure, a "communication channel" is component for organizing/grouping events and the specification and claims do not require each of the channels to represent different communications paths. Reusing applicant's analogy provided in the response submitted on 04/10/2007 [p. 13, first full paragraph], the claimed "channel" would be the same as a Patent Office Mail Stop Designation. For example, the package with the appeal brief will be submitted to the Mail Stop Appeal Brief-Patents and the package with the response will be submitted to the Mail Stop Amendment. Each mail stop acts as a communication channel between the Patent Office and the Applicant and it is irrelevant how the package arrived at the Patent Office (i.e. hand carried or mailed). Even if applicant's disclosure and claims require the communication channel to be associated with different communication paths (which they do not), the topic in Maffeis would still read on the feature because the topics in Maffeis can be associated with transmission channels.

3. Applicant's arguments with regards to the Najmi reference have been fully considered and are persuasive. However, upon further consideration, a new ground(s) of rejection is made in view of Maffeis and U.S. Patent No. 6,738,975 to Yee et al.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. **Claims 1 – 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,721,779 to Maffeis [cited in the previous office action] in view of U.S. Patent No. 6,738,975 to Yee et al. [hereinafter Yee].**

7. As to claim 1, Maffeis teaches the invention substantially as claimed including a method of exchanging information among applications [a system for the delivery of data between applications; col. 1, line 55 – col. 2, line 10], the method comprising:

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providing a plurality of transformers [protocol adapter 2a, 2a', 2a" at the client side and received by a protocol adapter 1a, 1b, 1c, 1d, 1e, 1f or 1g at the proxy side; col. 4, line 63 – col. 5, line 6], each transformer corresponding to a unique format [protocol adapters encapsulate at least one logic needed to: Interface with a transport protocol, such as HTTP, WAP or GSM Data; col. 4, lines 26 – 32];

using a first transformer to transmit a data object in a common format [protocol adapters allow the message proxy to send and receive messages to and from message clients using arbitrary wireless protocols; col. 3, lines 4 – 23];

publishing the common format data object to a communication channel [client sends to the proxy only the JMS message and the code information related with the topic; col. 3, line 47 – col. 4, line 3], the channel [topic; col. 3, lines 47 – col. 4, line 4] being selected on the basis of the data object [a topic T can, depending on the application, denote a stream of stock quotes, of sports news, or denote a transmission channel; col. 5, line 36 – 50];

subscribing to the communication channel to retrieve the published common format data object [When a JMS message is received on a topic or queue the proxy 1 is subscribed to on behalf of the client, the proxy creates a message token containing the data of the JMS message. The message token is then sent to the client 2 using wireless communication; col. 5, lines 13 – 21]; and

using a second transformer to send the data object to a second application [For that the token is sent via a protocol adapter 1a, 1b, 1c, 1d, 1e, 1f or 1g at the proxy side, and received by the protocol adapter 2a, 2a', 2a" at the client side; col. 5, lines 13 – 21].

Although Maffeis discloses the use of transformers [protocol adapters] to allow a message proxy to send and receive messages to and from message clients using arbitrary wireless protocols [col. 3, lines 5 – 22], Maffeis does not disclose a first transformer to transform a data object from a format understandable by a first application into a common format data object, and a second transformer to transform the common format data object into a format understandable by a second application.

However, Yee teaches an enterprise messaging service implemented using the Java Messaging Service that enables system to use multiple message modes and supports message hubs and message persistence [col. 7, lines 60 – 65], a method of exchanging information among applications [an integration server 170, including an enterprise messaging engine 180; col. 15, lines 20 – 32], a plurality of transformers [intelligent agent-adapters; col. 16, lines 54 – 65], each transformer corresponding to a unique transformation from one format into another [A message definition 613 not only identifies the kind of system message that the object 600 is to handle, but it also defines the hierarchical structure or schema of that system message; col. 18, lines 30 – 39], a first transformer [message definition 613 for a source adapter 622 must include instructions for creating Java types from the application data; col. 18, lines 47 – 62] to transform a data object from a format understandable by a first application [application data] into a common format data object [Java types], and a second transformer [message definition 613 for a target adapter 623 must include instructions for creating application data from the system Java objects; col. 18, lines 47 – 62] to transform the

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common format data object [Java objects] into a format understandable by a second application [application data].

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Maffeis to incorporate the features of a first transformer to transform a data object from a format understandable by a first application into a common format data object, and a second transformer to transform the common format data object into a format understandable by a second application because this facilitates an ability to seamlessly accommodate changes to existing APIs, continues to enable the use of those existing APIs with legacy systems [col. 16, line 65 – col. 17, line 17 of Yee] and enables perfectly seamless negotiation of incremental changes to the application resource 300 into the integration environment [col. 17, lines 5 – 23 of Yee].

8. As to claim 18, Maffeis as modified by Yee teaches facilitating the exchange of information among applications [col. 1, line 55 – col. 2, line 10 of Maffeis], the method comprising:

receiving a data object [JMS message and the code information; col. 3, line 47 – col. 4, line 3 of Maffeis] from a first application [client; col. 3, line 47 – col. 4, line 3 of Maffeis];

using the first transformer to transform the data object from a first format [col. 3, lines 4 – 23 of Maffeis] used by the first application into a common format object



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[message definition 613 for a source adapter 622 must include instructions for creating Java types from the application data; col. 18, lines 47 – 62 of Yee];

publishing the common format object to a communication channel [client sends to the proxy only the JMS message and the code information related with the topic; col. 3, line 47 – col. 4, line 3 of Maffeis];

receiving a request from a subscribing application to subscribe to the communication channel [When a JMS message is received on a topic or queue the proxy 1 is subscribed to on behalf of the client, the proxy creates a message token containing the data of the JMS message. The message token is then sent to the client 2 using wireless communication; col. 5, lines 13 – 21 of Maffeis];

using the second transformer [col. 5, lines 13 – 21 of Maffeis] to transform the common format object into a data object in a second format used by the subscribing application [message definition 613 for a target adapter 623 must include instructions for creating application data from the system Java objects; col. 18, lines 47 – 62 of Yee]; and

sending the data object in the second format to the subscribing application [For that the token is sent via a protocol adapter 1a, 1b, 1c, 1d, 1e, 1f or 1g at the proxy side, and received by the protocol adapter 2a, 2a', 2a" at the client side; col. 5, lines 13 – 21 of Maffeis]. As to the motivation for modifying the invention of Maffeis to incorporate the features of a first transformer to transform a data object from a format understandable by a first application into a common format data object, and a second transformer to transform the common format data object into a format understandable by a second

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application, see the rejection to claim 1 above. Maffeis does not specifically disclose using a first controller to route the received data object to a first transformer and using a second controller to route the common format object to a second transformer.

However, Yee teaches using a first controller [Agent services provide information adapters 621 need to connect to their applications; col. 20, lines 37 – 46] to route the received data object to a first transformer [Source adapters; col. 20, lines 11 – 21] and using a second controller [Adapters 621 are hosted by agent services; col. 20, lines 37 – 46] to route the common format object to a second transformer [Target adapters 623; col. 20, lines 37 – 46].

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Maffeis to incorporate the features of a first and second controller because this provides an agent-adaptor architecture that provides a robust facility supporting far more than simplistic interfaces and ensures a uniform event across the resource [col. 27, lines 59 – 65 of Yee]

9. As to claim 28, Maffeis as modified by Yee teaches a system for facilitating the exchange of information among applications [col. 1, line 55 – col. 2, line 10 of Maffeis], the system comprising:

a plurality of digital computers [ERP systems 22, 24, 26, 28, legacy systems 44, 48; col. 14, lines 45 – 58 of Yee], each of which executes application [ERP applications 20, packaged applications 30, custom and legacy applications 40; col. 14, lines 30 – 40 of Yee], each application being configured to exchange information representative of

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business events with other applications [a reliable store-and-forward messaging system, a capable message brokering facility, and a strong agent-adapter architecture for integrating disparate enterprise applications; col. 14, lines 20 – 30 of Yee]; and

an integration hub in a data communication with each of the digital computers for enabling transfer of information representative of business events between applications [Enterprise application integration (EAI) systems; col. 14, lines 10 – 20 of Yee], the integration hub including a computer-readable medium [col. 12, lines 45 – 60 of Yee] on which is encoded instructions for causing the computer to define

a plurality of process models each defining one or more conditions for sending a business event from an application to one or more other applications [A "durable subscription" is a property of the system's message hubs that ensures the hub target objects receive all messages intended for them; col. 7, lines 50 – 60 of Yee];

a shared object model configured to store data objects received from applications in a common format [communication between message client and message proxy is according to the familiar publish/subscribe or point-to-point model of JMS; col. 4, lines 15 – 22 of Maffeis];

a plurality of transformer [protocol adapter 2a, 2a', 2a" at the client side and received by a protocol adapter 1a, 1b, 1c, 1d, 1e, 1f or 1g at the proxy side; col. 4, line 63 – col. 5, line 6 of Maffeis] classes [protocol object; col. 3, lines 5 – 23 of Maffeis] configured to translate data object from a format used by one or more applications into the common format or vice versa [col. 18, lines 47 – 62 of Yee]; and

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a plurality of controller classes [Adapters 621 are hosted by agent services; col. 20, lines 37 – 46 of Yee] configured to route data objects to associated transformer classes [adapters; col. 20, lines 11 – 46 of Yee]. As to the motivations for combining Maffeis and Yee, see the rejections to claims 1 and 18 above.

10. As to claim 38, this is similar in scope to claim 18; therefore, this claim is rejected for the same reasons as claim 18 above.

11. As to claim 2, Maffeis as modified by Yee teaches the data object corresponds to one or more of a plurality of business events [col. 16, lines 54 – 65 of Yee].

12. As to claim 3, Maffeis as modified by Yee teaches using the first transformer to transform the data object from the format understandable by the first application into the common format data object comprises translating the data object from a vendor-specific format associated with the first application to an Interface Data Language (IDL) object and storing the IDL object in a shared object model [definition objects 610; col. 17, lines 35 – 65 of Yee].

13. As to claim 4, Maffeis as modified by Yee teaches the shared object model comprises a central repository of data objects corresponding to business events [col. 4, lines 15 – 22 of Maffeis].

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14. As to claim 5, Maffeis as modified by Yee teaches using a first transformer to transform the data object from the format understandable by the first application into the common format data object [col. 18, lines 47 – 62 of Yee] is performed in response to a recognition of a business event by the first application [col. 16, lines 54 – 65 of Yee].

15. As to claim 6, Maffeis as modified by Yee teaches that the method is performed in accordance with a plurality of process models that collectively define when information is to be exchanged among applications [executing integration flows to process events; col. 16, lines 1 – 15 of Yee].

16. As to claim 7, Maffeis as modified by Yee teaches publishing the common data format object to a communications channel is performed by a source connector and subscribing to the communication channel is performed by a target connector [Transformers 629 can be targets, requesters, and sources; col. 23, lines 35 – 44 and col. 21, line 48 – col. 22, line 7 of Yee].

17. As to claim 8, Maffeis teaches publishing the common format data object to a communication channel is performed in accordance with a channel architecture that defines a plurality of communication channels having relative priorities [col. 5, lines 35 – 51].

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18. As to claim 9, Maffeis as modified by Yee teaches using the second transformer to transform the common format data object into the format understandable by the second application comprises retrieving a stored Interface Data Language (IDL) format object and translating the IDL object into a vendor-specific format associated with the second application [definition objects 610; col. 17, lines 35 – 65 of Yee].

19. As to claim 10, Maffeis as modified by Yee teaches information is exchanged among business support systems or operational support systems or a combination thereof [col. 13, line 58 – col. 14, line 11 of Yee].

20. As to claim 11, Maffeis teaches at least one of the transformers comprises a class defined in an object-oriented programming language [protocol object; col. 3, lines 5 – 23].

21. As to claim 12, Maffeis as modified by Yee teaches a controller [col. 20, lines 37 – 46 of Yee] that is configured to route data objects to an associated transformer [col. 29, lines 50 – 63 of Yee].

22. As to claim 13, Maffeis as modified by Yee teaches routing a data object to the first transformer using a first controller [col. 29, lines 50 – 63 of Yee].

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23. As to claim 14, Maffeis as modified by Yee teaches routing the common format data object to the second transformer using a second controller [col. 20, lines 37 – 46 and col. 29, lines 50 – 63 of Yee].

24. As to claim 15, Maffeis as modified by Yee teaches at least one of the controllers comprises a class defined in an object-oriented programming language [col. 15, lines 40 – 55 of Yee].

25. As to claim 16, Maffeis as modified by Yee teaches an acknowledgement class to exchange status messages among applications ["Adapter Requestor" class; col. 28, line 60 – col. 29, line 10 of Yee].

26. As to claim 17, Maffeis as modified by Yee teaches using the acknowledgement class to perform exception handling [col. 7, lines 2 – 11 of Yee].

27. As to claims 19 – 23 and 25 – 27, these are similar in scope to claims 2 – 6 and 8 – 10; therefore, these claims are rejected for the same reasons as claims 2 – 6 and 8 – 10 above.

28. As to claim 24, Maffeis as modified by Yee teaches if requests are received from a plurality of subscribing applications, then, for each subscribing application [col. 24, lines 46 – 64 of Yee], the common format object is transformed using an associated

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transformer into a format corresponding to the subscribing application and sent to the subscribing application [col. 18, lines 47 – 62 of Yee].

29. As to claim 29, Maffeis teaches a channel architecture defining a plurality of communication channels to which data objects from an application are to be published [col. 5, lines 35 – 51].

30. As to claims 30 – 32, these are similar in scope to claims 8, 16 and 17; therefore, these claims are rejected for the same reasons as claims 8, 16 and 17 above.

31. As to claim 33, Maffeis as modified by Yee teaches each process model corresponds to a different business event [col. 16, lines 54 – 65 of Yee].

32. As to claim 34, Maffeis as modified by Yee teaches the shared object model comprises a central repository of data objects in an Interface Description Language (IDL) format [definition objects 610; col. 17, lines 35 – 65 of Yee].

33. As to claim 35, Maffeis as modified by Yee teaches each transformer class corresponds to a unique application format-common format translation [adapters; col. 20, lines 11 – 46 and col. 15, lines 40 – 55 of Yee].



34. As to claim 36, Maffeis as modified by Yee teaches each controller class is configured to route data objects [col. 29, lines 50 – 63 of Yee] to an associated transformer class according to a process model [col. 15, lines 40 – 55 of Yee].

35. As to claim 37, this is similar in scope to the combination of claims 11 and 15; therefore, this claim is rejected for the same reasons as claims 11 and 15 above.

36. As to claim 39, Maffeis as modified by Yee teaches the machine-readable [col. 12, lines 45 – 60 of Yee] instructions comprise computer software instructions executable by one or more computer systems [col. 12, lines 25 – 38 of Yee].

37. As to claims 40 – 48, these are similar in scope to claims 19 – 27; therefore, these claims are rejected for the same reasons as claims 19 – 27 above.

#### **CONTACT INFORMATION**

38. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (571) 272-3768. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on 571-272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Li B. Zhen  
Examiner  
Art Unit 2194

LBZ

  
6/25/2007